ANSWER 1 OF 12 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2001500585 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11549731
TITLE: Isolation and expression pattern of human Unc-33-like phosphoprotein 6/collapsin response mediator protein 5 (Ulip6/CRMP5): coexistence with Ulip2/CRMP2 in Sema3a-sensitive oligodendrocytes.
AUTHOR: Ricard D; Rogemond V; Charrier E; Aguera M; Bagnard D; Belin M F; Thomasset N; Honnorat J
CORPORATE SOURCE: Institut National de la Sante et de la Recherche Medicale U 433, Institut Federatif des Neurosciences de Lyon, Hopital Neurologique, 69003 Lyon, France.
SOURCE: Journal of neuroscience : official journal of the Society for Neuroscience, (2001 Sep 15) 21 (18) 7203-14. Journal code: 8102140. ISSN: 1529-2401.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF264015
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010911
Last Updated on STN: 20011008
Entered Medline: 20011004

AB The Unc-33-like phosphoprotein/collapsin response mediator protein ( **Ulip/CRMP**) family consists of four homologous phosphoproteins considered crucial for brain development. Autoantibodies produced against member(s) of this family by patients with paraneoplastic neurological diseases have made it possible to clone a fifth human **Ulip/CRMP** and characterize its cellular and anatomical distribution in developing brain. This protein, referred to as Ulip6/CRMP5, is highly expressed during rat brain development in postmitotic neural precursors and in the fasciculi of fibers, suggesting its involvement in neuronal migration/differentiation and axonal growth. In the adult, Ulip6/CRMP5 is still expressed in some neurons, namely in areas that retain neurogenesis and in oligodendrocytes in the midbrain, hindbrain, and spinal cord. Ulip2/CRMP2 and Ulip6/CRMP5 are coexpressed in postmitotic neural precursors at certain times during development and in oligodendrocytes in the adult. Because Ulip2/CRMP2 has been reported to mediate semaphorin-3A (Sema3A) signal in developing neurons, in studies to understand the function of Ulip6/CRMP5 and Ulip2/CRMP2 in the adult, purified adult rat brain oligodendrocytes were cultured in a Sema3A-conditioned medium. Oligodendrocytes were found to have Sema3A binding sites and to express neuropilin-1, the major Sema3A receptor component. In the presence of Sema3A, these oligodendrocytes displayed a dramatic reduction in process extension, which was reversed by removal of Sema3A and prevented by anti-neuropilin-1, anti-Ulip6/CRMP5, anti-Ulip2/CRMP2 antibodies, or VEGF-165, another neuropilin-1 ligand. These results indicate the existence in the adult brain of a Sema3A signaling pathway that modulates oligodendrocyte process extension mediated by neuropilin-1, Ulip6/CRMP5, and Ulip2/CRMP2, and they open new fields of investigation of neuron/oligodendrocyte interactions in the normal and pathological brain.

L8 ANSWER 2 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:3822 BIOSIS
DOCUMENT NUMBER: PREV200200003822
TITLE: Intersectin regulates neurite outgrowth.
AUTHOR(S): Quinn, C. C. [Reprint author]; Wasiak, S.; Hussain, N. K.; Kinjo, T. G. [Reprint author]; Bell, A.; Kay, B. K.; Baranes, D.; Hockfield, S. [Reprint author]; McPherson, P. S.

CORPORATE SOURCE: Neurobiology, Yale University School of Medicine, New Haven, CT, USA
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2361. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Dec 2001
Last Updated on STN: 25 Feb 2002

AB The neuronal growth cone is the site of a rapid endocytic cycle that may be important in the modulation of neurite outgrowth (Diefenbach et al., J. Neurosci. 19:9436; Fournier et al., J. Cell. Biol. 107:1505). We have found that intersectin, an adaptor protein that functions in endocytosis, also regulates the outgrowth of neurites. Intersectin is expressed as two isoforms, intersectin-s, which is ubiquitously expressed and consists of two EH domains, a central helical domain, and five SH3 domains, and intersectin-l, which is neural specific and contains a C-terminal extension that encodes DH, PH, and C2 domains. Through the DH domain, intersectin-l functions as a guanine nucleotide exchange factor (GEF) specific for Cdc42 and stimulates actin assembly leading to filopodia formation in fibroblasts. We show that intersectin is enriched in growth cones, and is concentrated at the most distal tip of filopodia. Overexpression of intersectin-l, but not intersectin-s, results in an increase in neurite length, suggesting that the GEF domain can regulate neurite outgrowth. We have also found that the TUC family (TOAD/**Ulip/CRMP**) of proteins binds to the N-terminal SH3 domain (SH3A) of intersectin and that the disruption of intersectin's SH3A domain interactions results in increased neurite branching. Together, these data suggest that intersectin functions to regulate neurite length through its GEF domain and neurite branching through its SH3A domain.

L8 ANSWER 3 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2001:486869 BIOSIS
DOCUMENT NUMBER: PREV200100486869
TITLE: The olfactory bulb is a novel source of neural stem cells in adult CNS: Identification, isolation, and culture.
AUTHOR(S): Liu, Z. [Reprint author]; Martin, L. J. [Reprint author]
CORPORATE SOURCE: Pathology, Johns Hopkins Univ Sch Med, Baltimore, MD, USA
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 348. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Oct 2001
Last Updated on STN: 23 Feb 2002

AB Neuronal replacement by stem cell therapy offers new hope for the treatment of acute and chronic degenerative disorders of the central nervous system, including stroke, cardiac arrest, Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis. Neural progenitor cells in adult mouse and rat olfactory bulb (OB) were identified by bromodeoxyuridine (BrdU) incorporation and immunolabeling for TUC-4 (**Ulip**-1/**CRMP**-4), a marker for early postmitotic neurons. The distributions of BrdU-positive cells and TUC-4-labeled early newborn neurons were identical. These cells were found in both the core and shell

of the OB throughout its anterior-posterior extent., but were most concentrated in the core region of the posterior OB. In the shell region the cells appeared as neurospheres and in the core the cells extended processes. Stem cell-containing OB tissue was microdissected and used for in vitro slice and dissociated cell cultures. Stem cells isolated from the OB proliferated, differentiated into newborn neurons, and survived in culture. These cells could be classified morphologically as isolated proliferating cells, clonal aggregates of proliferating cells, neurospheres, and newborn neurons. Based on proliferation and early differentiation kinetics, this cell population is distinct from the rostral migratory stream. We conclude that the OB in adult rodents is a source of large numbers of viable neural stem cells that can be isolated and cultured and used in autologous cell therapy for neuronal replacement.

L8 ANSWER 4 OF 12 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001181739 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11220741
TITLE: Paraneoplastic anti-CV2 antibodies react with peripheral nerve and are associated with a mixed axonal and demyelinating peripheral neuropathy.
COMMENT: Comment in: Ann Neurol. 2001 Nov;50(5):688-91. PubMed ID: 11706981
AUTHOR: Antoine J C; Honnorat J; Camdessanche J P; Magistris M; Absi L; Mosnier J F; Petiot P; Kopp N; Michel D
CORPORATE SOURCE: Equipe d'Accueil 3063, Faculte de Medecine de Saint-Etienne, Service de Neurologie, H pital de Bellevue, France.. 113464.3717@compuserve.com
SOURCE: Annals of neurology, (2001 Feb) 49 (2) 214-21. Journal code: 7707449. ISSN: 0364-5134.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20020302
Entered Medline: 20010329

AB Subacute sensory neuronopathy with anti-Hu antibodies is the best-characterized paraneoplastic peripheral neuropathy associated with carcinoma. Anti-CV2 antibodies, another group of paraneoplastic antibodies, react with a 66-kd brain protein belonging to the family of **Ulip/CRMP** proteins. The manifestations associated with anti-CV2 antibodies include cerebellar degeneration, uveitis, and peripheral neuropathy. Some of these patients also have anti-Hu antibodies. We have compared the clinical, electrophysiological, and pathological characteristics of the peripheral neuropathy in 9 patients with anti-CV2 antibodies (3 of whom also had anti-Hu antibodies) and 12 patients with only anti-Hu antibodies. Data for patients with anti-Hu antibodies alone indicated subacute sensory neuronopathy. Patients with anti-CV2 antibodies had a mixed axonal and demyelinating sensory motor neuropathy that was sometimes superimposed on subacute sensory neuronopathy when both anti-CV2 and anti-Hu antibodies were present. Unlike anti-Hu antibodies, anti-CV2 antibodies reacted with peripheral nerve antigens, as shown by their ability to bind to a 66-kd protein in human and rat nerve on Western blot analysis and to immunolabel peripheral nerve axons and sensory neurons on immunohistochemical study.

L8 ANSWER 5 OF 12 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2000309729 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10770920
TITLE: Evidence that collapsin response mediator protein-2 is involved in the dynamics of microtubules.
AUTHOR: Gu Y; Ihara Y

CORPORATE SOURCE: Department of Neuropathology, Faculty of Medicine, University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan.
SOURCE: Journal of biological chemistry, (2000 Jun 16) 275 (24) 17917-20.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000728
Last Updated on STN: 20000728
Entered Medline: 20000720

AB Collapsin response mediator protein-2 (**CRMP**-2) is a member of the **CRMP**/TOAD/**Ulip**/DRP family of cytosolic phosphoproteins involved in neuronal differentiation and axonal guidance. CRMP-2 mediates the intracellular response to collapsin 1/semaphorin 3A, a repulsive extracellular guidance cue for axonal outgrowth. The mutation of UNC-33, a Caenorhabditis elegans homolog of CRMP-2, results in abnormality of microtubules in neurites, but the mechanism of CRMP-2 action remains to be clarified. Here, we report that overexpression of human CRMP-2 in Neuro2a cells, a mouse neuroblastoma cell line, results in blebbing of the cytoplasm. Furthermore, some cells exhibited intranuclear inclusions, which were labeled with antibodies to CRMP-2 and tubulin. CRMP-2 was found to be associated with microtubule bundles in the spindles at the metaphase and in the midbodies at the late telophase in mitotic cells. Thus, it is most likely that failure of complete disassembly of the spindle microtubules during mitosis is responsible for the formation of these intranuclear inclusions. We suggest that CRMP-2 functions by regulating the dynamics of microtubules.

L8 ANSWER 6 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2000216732 EMBASE
TITLE: Structure and promoter analysis of the human unc-33-like Phosphoprotein gene. E-Box required for maximal expression in neuroblastoma and myoblasts.
AUTHOR: Matsuo T.; Stauffer J.K.; Walker R.L.; Meltzer P.; Thiele C.J.
CORPORATE SOURCE: C.J. Thiele, Cell and Molecular Biology Section, Pediatric Oncology Branch, Division of Clinical Sciences, Bethesda, MD 20892, United States. ct47a@nih.gov
SOURCE: Journal of Biological Chemistry, (2 Jun 2000) 275/22 (16560-16568).
Refs: 24
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The human unc-33-like phosphoprotein (hUlip/**CRMP**-4) is a member of a family of developmentally regulated genes that are highly expressed in the nervous system. Mutations in the C. elegans unc-33 gene lead to worms with abnormal movements. The hUlip gene encodes a 570-amino acid protein with 98% homology to its murine (**Ulip**) (Byk, T., Dobransky, T., Cifuentes-Diaz, C., and Sobel, A. (1996) J. Neurosci. 16, 688-701) and rat (**CRMP**-4) (Wang, L. H., and Strittmatter, S. M. (1996) J. Neurosci. 16, 6197-6207) counterparts (Gaetano, C., Matsuo, T., and Thiele, C. J. (1997) J. Biol. Chemical 272, 12195- 12201). The hUlip gene was isolated from a human genomic library. It contains 15 exons, including

an exon defined by an anaplastic oligodendroglioma expressed sequence tag, and spans at least 61.7 kilobases. hUlip lacks sequences corresponding to the first six exons found in unc-33, unc-33 exons correspond to homologous hUlip exons as follows: VII to 1 and 2, VIII to 3-9, IX to 10-12, and X to 13 and 14. Using the hUlip clone 1 phage, fluorescence in situ hybridization analysis indicates that the hybridization signal localizes to human chromosome 5q32. Deletion analysis of 5'-flanking sequences delineated the sequences sufficient to express a reporter gene in both neuroblastoma cells and myoblasts. A consensus MyoD/myogenin binding site is located in a region of the downstream promoter that is nearly identical to its mouse homologue. Mutagenesis shows that this conserved MyoD/myogenin site is necessary for full promoter activity in both myoblasts and neuroblastoma cells.

L8 ANSWER 7 OF 12 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2001142580 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11085871
TITLE: Differential expression of collapsin response mediator proteins (**CRMP/ULIP**) in subsets of oligodendrocytes in the postnatal rodent brain.
AUTHOR: Ricard D; Stankoff B; Bagnard D; Aguera M; Rogemond V; Antoine J C; Spassky N; Zalc B; Lubetzki C; Belin M F; Honnorat J
CORPORATE SOURCE: INSERM U433 Hopital Neurologique, Lyon, France.
SOURCE: Molecular and cellular neurosciences, (2000 Oct) 16 (4) 324-37.
Journal code: 9100095. ISSN: 1044-7431.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010308

AB The family of collapsin response mediator protein/Unc-33-like protein ( **CRMP/Ulip**), composed of four homologous members, is specifically and highly expressed in the nervous system during embryonic neuronal development and dramatically down-regulated in the adult. Members of this family have been proposed to be part of the semaphorins signal transduction pathway involved in axonal outgrowth. Here, we show by in situ hybridization and immunohistochemistry that CRMP2/Ulip2, and to a lesser extent CRMP3/Ulip4, are expressed in immature and mature oligodendrocytes, but not in astrocytes. Transcripts encoding the other **CRMP/Ulip** members are also detectable by RT-PCR in highly purified mature oligodendrocytes. Interestingly, in the adult, the protein CRMP2/Ulip2 is mainly detectable in subsets of oligodendrocytes distributed according to an increasing rostrocaudal gradient, with the largest number of positive cells being present in the brain stem and spinal cord. In cultures of highly purified oligodendrocytes, however, CRMP2/Ulip2 was detectable in all the cells. Addition of Sema3A in the culture medium completely inhibited the emergence of oligodendrocyte processes suggesting that, as in neurons, a Sema3A signaling pathway mediated via CRMP2/Ulip2 may be involved in the regulation of oligodendroglial process outgrowth.

L8 ANSWER 8 OF 12 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2000485685 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11034345
TITLE: Ulip6, a novel unc-33 and dihydropyrimidinase related protein highly expressed in developing rat brain.
AUTHOR: Horiuchi M; El Far O; Betz H
CORPORATE SOURCE: Department of Neurochemistry, Max-Planck-Institute for

Brain Research, Frankfurt am Main, Germany.
SOURCE: FEBS letters, (2000 Sep 1) 480 (2-3) 283-6.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ131436; GENBANK-AJ251275
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001107

AB Here, we report the identification of Ulip6, a novel unc-33 and dihydropyrimidinase related protein that belongs to the **Ulip/CRMP** protein family. Ulip6 was found in a yeast two-hybrid screen using the neuronal glycine transporter GlyT2 as bait. The rat and human Ulip6 sequences are highly homologous and most closely related to the liver enzyme dihydropyrimidinase (Ulip5). Northern and Western analysis of rat tissues revealed that the distribution of the Ulip6 mRNA and protein resembles those of brain-type Ulip proteins. Like Ulip1-4, Ulip6 is highly expressed in embryonic and early postnatal brain and spinal cord. These findings are consistent with Ulip6 having a function in neuronal differentiation and/or axon growth.

L8 ANSWER 9 OF 12 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2001182555 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11167013
TITLE: Cloning and characterization of the Caenorhabditis elegans CeCRMP/DHP-1 and -2; common ancestors of CRMP and dihydropyrimidinase?.
AUTHOR: Takemoto T; Sasaki Y; Hamajima N; Goshima Y; Nonaka M; Kimura H
CORPORATE SOURCE: Department of Experimental Radiology, Shiga University of Medical Science, Otsu, 520-2192, Shiga, Japan.
SOURCE: Gene, (2000 Dec 31) 261 (2) 259-67.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB040992; GENBANK-AB040993
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010329

AB The vertebrate CRMP (collapsin-response-mediator protein) gene family comprises at least four members. These CRMPs exhibit about 60% amino acid identity with vertebrate dihydropyrimidinase (DHP), an amidohydrolase involved in the pyrimidine degradation pathway. **CRMP** is also referred to as DRP (DHP-related protein), TOAD-64 (turned on after division, 64 kDa) and **Ulip** (Unc-33-like phosphoprotein). These vertebrate CRMPs are expressed mainly in early neuronal differentiation, which suggests that they play a role in neuronal development. In this study we isolated two cDNA clones from nematode C. elegans based on their sequence homology to vertebrate CRMPs and DHP. These two molecules, termed CeCRMP/DHP-1 and -2, turned out to be Ulip-B and -A, respectively, which were previously identified in the C. elegans genomic database by Byk et al. (1998). These newly isolated molecules were believed to represent a common ancestral state before the gene duplication between CRMPs and DHP. CeCRMP/DHP-1 and -2 protein retained all putative zinc-binding residues thought to be essential for the amidohydrolase activity of DHP and exhibited a weak amidohydrolase activity when 5-bromo-dihydrouracil was used as a substrate. Whole-mount in situ hybridization and expression

analysis using GFP fusions revealed that CeCRMP/DHP-1 was transiently expressed in the hypodermis of C. elegans during the early larva stage. CeCRMP/DHP-1 was also expressed in a single nerve cell between the pharynx and ring neuropil. On the other hand, expression of CeCRMP/DHP-2 was observed in the body wall muscle throughout the lifespan of C. elegans. These results indicate that a major site of CeCRMP/DHP-1 and -2 expression is non-neuronal. Targeted gene disruption of CeCRMP/DHP-2 caused no particular difference in appearance or movement phenotype.

L8 ANSWER 10 OF 12 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2000184735 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10721710
TITLE: Collapsin response mediator protein-3/unc-33-like protein-4 gene: organization, chromosomal mapping and expression in the developing mouse brain.
AUTHOR: Quach T T; Mosinger B Jr; Ricard D; Copeland N G; Gilbert D J; Jenkins N A; Stankoff B; Honnorat J; Belin M F; Kolattukudy P
CORPORATE SOURCE: Faculte de Medecine Laennec, INSERM (U433), Lyon, France.
SOURCE: Gene, (2000 Jan 25) 242 (1-2) 175-82.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000413
Last Updated on STN: 20000413
Entered Medline: 20000403

AB CRMPs (collapsin response mediator proteins)/ULIPs (unc-33-like proteins) are a family of intracytoplasmic proteins that are expressed mainly in the brain. The involvement of **CRMP/ULIP** members in neuronal differentiation, growth cone motility and axonal collapse has been suggested. We recently found that a member of this family, CRMP3/ULIP4, corresponds to POP66 (paraneoplastic oligodendrocyte protein of 66 kDa), a protein which may be associated with auto-immune induced-neuronal degeneration in paraneoplastic neurological syndromes. However, the physiological functions of these proteins remain to be elucidated. Further studies, including the generation of cell lines and of animals with modified/disrupted **CRMP/ULIP** gene expression, are necessary to explore the functions of this protein. We have cloned and determined the organization and chromosomal localization of the mouse gene encoding CRMP3/ULIP4. The gene is composed of 14 exons and spans more than 20 kb. We assigned the mouse CRMP3/ULIP4 gene to the distal end of chromosome 7. In mouse brain, in situ hybridization showed that CRMP3/ULIP4 mRNA is expressed mainly in the dentate gyrus of hippocampus, in the granular layers of cerebellum and in the inferior olive of the pons, the nucleus which controls movement and posture, and adjusts the major output of descending motor system.

L8 ANSWER 11 OF 12 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2000062489 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10594648
TITLE: **Ulip/CRMP** proteins are recognized by autoantibodies in paraneoplastic neurological syndromes.
AUTHOR: Honnorat J; Byk T; Kusters I; Aguera M; Ricard D; Rogemond V; Quach T; Aunis D; Sobel A; Mattei M G; Kolattukudy P; Belin M F; Antoine J C
CORPORATE SOURCE: INSERM U 433, Hopital Neurologique, Lyon, France.. honnorat@cismsun.univ-lyon1.fr
SOURCE: European journal of neuroscience, (1999 Dec) 11 (12) 4226-32.
Journal code: 8918110. ISSN: 0953-816X.

PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Y09079; GENBANK-Y10976; GENBANK-Y97105
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000218
Last Updated on STN: 20000218
Entered Medline: 20000210

AB Anti-CV2 autoantibodies have recently been discovered in patients with paraneoplastic neurological diseases (PND). These disorders are associated with neuronal degeneration, mediated by autoimmune processes, in patients with systemic cancer. Anti-CV2 autoantibodies recognize a brain protein of 66 kDa developmentally regulated and specifically expressed by a subpopulation of oligodendrocytes in the adult brain. Here, we demonstrate that anti-CV2 sera recognize several post-translationally modified forms of Ulip4/CRMP3, a member of a protein family related to the axonal guidance and homologous to the Unc-33 gene product in Caenorhabditis elegans. The sequence of the human Ulip4/CRMP3 was determined and the gene localized to chromosome 10q25.2-q26, a region mutated in glioblastomas and containing tumour suppressor genes. The identification of the **Ulip/CRMP** proteins as recognized by anti-CV2 sera should provide new insights into the role of **Ulip** /CRMPs in oligodendrocytes and into pathophysiology of PND.

L8 ANSWER 12 OF 12 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 1999434166 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10504203
TITLE: A family of proteins implicated in axon guidance and outgrowth.
AUTHOR: Quinn C C; Gray G E; Hockfield S
CORPORATE SOURCE: Section of Neurobiology, Yale University School of Medicine, Cedar Street, SHM C-405, New Haven, Connecticut 06520-8001, USA.
CONTRACT NUMBER: P01 NS22807 (NINDS)
T32NS207224 (NINDS)
SOURCE: Journal of neurobiology, (1999 Oct) 41 (1) 158-64. Ref: 37
Journal code: 0213640. ISSN: 0022-3034.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991110

AB Rapid progress in the identification and characterization of axon guidance molecules and their receptors has left the field poised to explore the intracellular mechanisms by which signals are transduced into growth cone responses. The TUC (TOAD/**Ulip/CRMP**) family of proteins has emerged as a strong candidate for a role in growth cone signaling. The TUC family members reach their highest expression levels in all neurons during their peak periods of axonal growth and are strongly down-regulated afterward. When axonal regrowth in the adult is triggered by axotomy, TUC-4 is reexpressed during the period of regrowth. Mutations in unc-33, a homologous nematode gene, lead to severe axon guidance errors in all neurons. Furthermore, the TUC family is required for the growth cone-collapsing activity of collapsin-1. An important role for the TUC family is also suggested by its high degree of interspecies amino acid sequence identity, with the rat TUC-2 protein showing 98% identity with its chick ortholog and 89% identity with its Xenopus ortholog.

Information gained from the study of the TUC family will be of key importance in understanding how growth cones find their targets.